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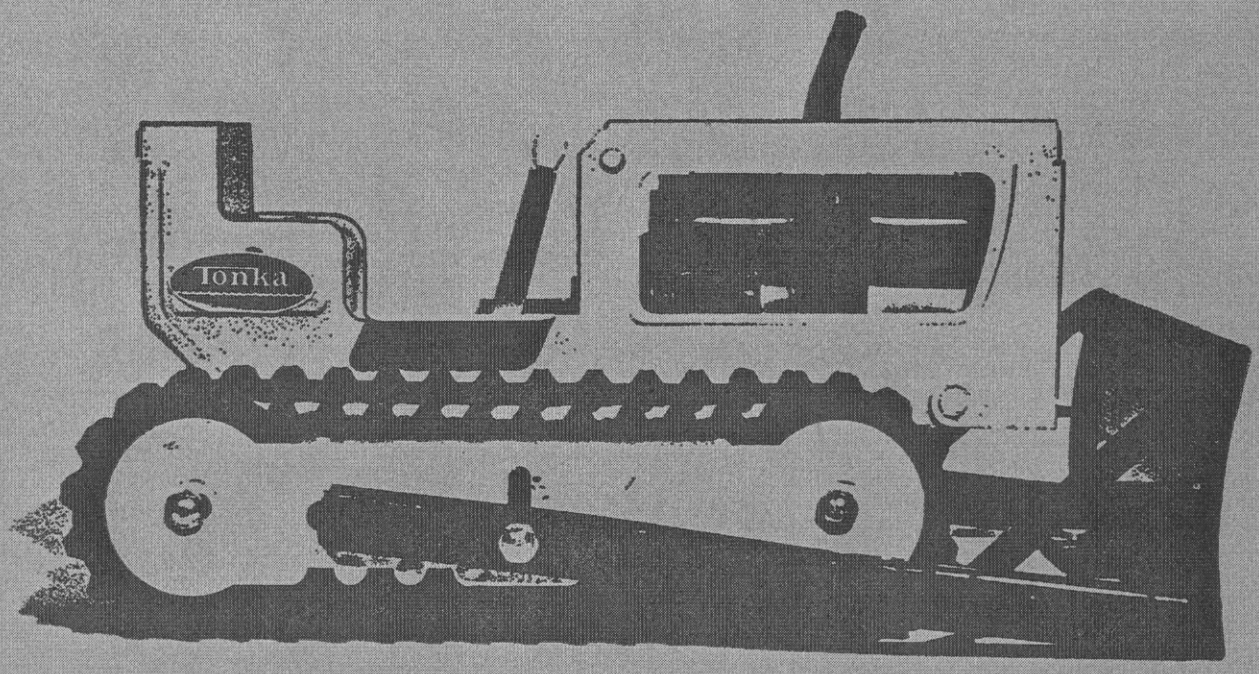


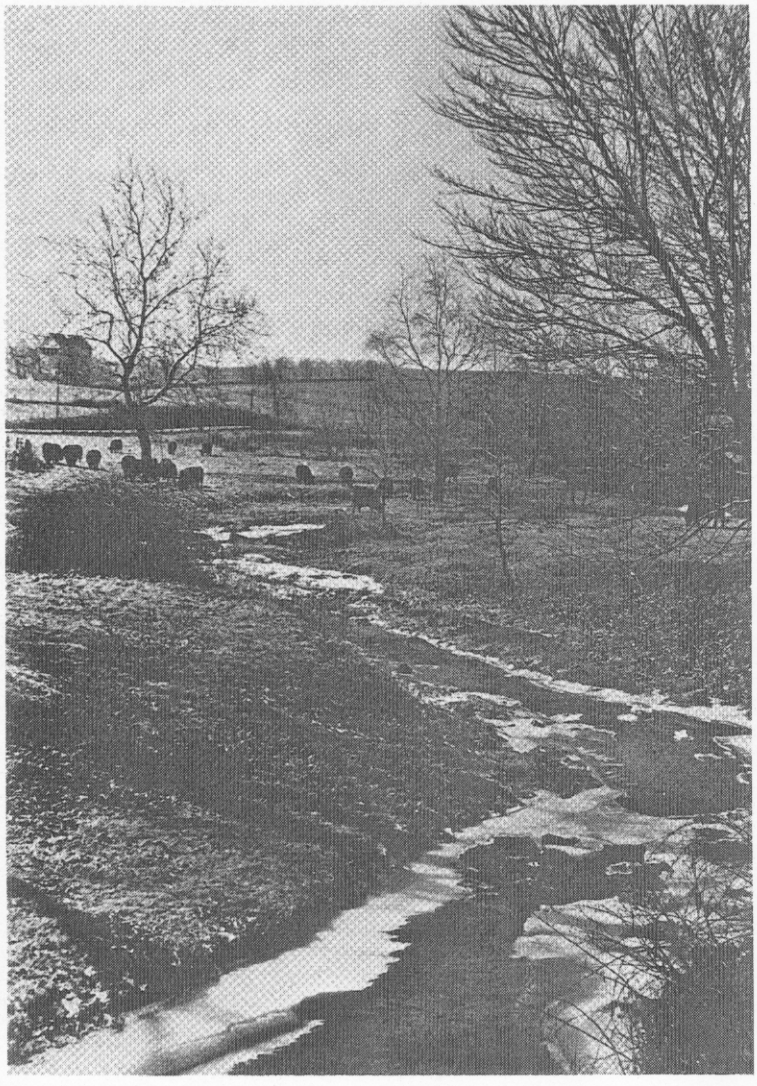
THE URBANIZATION GAME

THE BRANDYWINE PLAN

There is nothing more difficult to carry out, nor more doubtful of success, nor more dangerous to handle, than to initiate a new order of things. For the reformer has enemies in all who profit by the old order, and only luke-warm defenders in all those who would profit by the new order. This luke-warmness arises partly from fear of their adversaries, who have the law in their favour; and partly from the incredulity of mankind, who do not truly believe in anything new until they have had actual experience of it.

MACHIAVELLI in *The Prince* (1513)

John C. Keene and Ann Louise Strong



The Brandywine Plan proposed an integrated program for protecting water resources and guiding urban development as it would occur over the next fifty years in a rural watershed thirty miles west of Philadelphia. The program would have been implemented by the county through purchase of easements and by the county and townships through regulations. The residents of the watershed rejected the proposals. The authors describe the program, analyze the various sources of the decision not to implement it, and discuss implications for similar future proposals.

The watershed of the Upper East Branch of Brandywine Creek is a gentle place. Cornfields blend into pastures and clumps of deciduous woods. On a sunny August afternoon, a hush hangs over the countryside, broken only by the rasp of drying cornstalks. The stream itself glides south toward the paper mills of Downingtown, still fresh and sparkling, except for occasional spills from a small steel finishing plant and a hog slaughterhouse.

The watershed is far from the anxiety and hustle of Philadelphia and Wilmington—an hour by car and, some would say, a century or two in terms of concern for the surging problems of city and nation. Yet the Upper East Branch is on the verge of development. Three or four miles to the east is an interchange of the Pennsylvania Turnpike, the first undeveloped one west of Philadelphia. (See Figure 1.) For several years, signs proclaiming "Commercial Land" and "Zoned Industrial," have surrounded the interchange. Lately substantial construction has occurred. Two miles to the south, development along the Lancaster Pike corridor, the rail and highway link between Philadelphia and Lancaster, has accelerated, bringing jobs, new homes,

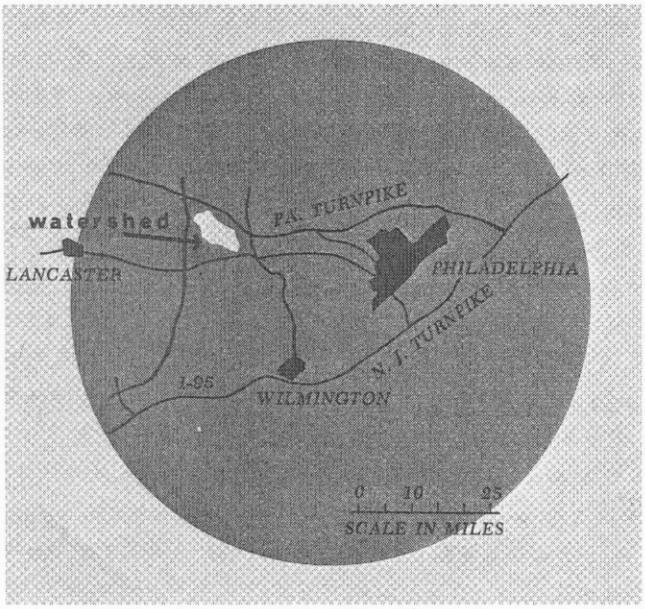


FIGURE 1 *Location of the Brandywine Watershed*

new school children, new sewers, new taxes, and higher land prices to the region.

Because it offered a combination of factors—strategic location on the rural fringe of a major metropolis, good stream quality, natural beauty, and an apparent concern for sound growth on the part of the county's public and private leaders—the thirty-seven square mile watershed of the Upper East Branch of Brandywine Creek was selected as the locus of a proposal for a multipurpose demonstration project.

The Proposal

Late in the fall of 1965, the five principals of the research team—Robert E. Coughlin and Benjamin H. Stevens of the Regional Science Research Institute, Luna B. Leopold of the U.S. Geological Survey, and the authors of this article—proposed to the Chester County Commissioners and the Chester County Water Resources Authority that they join together to develop innovative methods of guiding development in the Upper East Branch watershed to protect its water resources and abundant natural amenities. The research team had given considerable thought to the economic, governmental, and legal aspects of the problem [1] and suggested that acquisition of permanent conservation easements in land should form the basis of the action program. They also stated that exercise of the power of eminent domain would probably be necessary to implement the plan. With express reservations about using eminent domain, the county commissioners accepted the proposals. They decided to separate the planning phase of the proposal from the implementation phase and to seek approval from the affected townships' boards of supervisors before authorizing the Water Resources Authority and the research team to proceed with the planning phase. This accorded with the views of the Ford Foundation, the primary funding agency, which saw public acceptance of the plan as a necessary prerequisite to contribution of funds for plan implementation.

By April 1966, all the townships had approved the planning phase proposal. The county commissioners, the Pennsylvania Department of Forests and Waters, and the U.S. Geological Survey allocated funds to supplement the Ford planning grant,[2] and work began. The research team took primary responsibility for developing the plan while the Water Resources Authority agreed to implement the second major work segment—communications and liaison with the residents of the watershed. The final plan and program evolved from both segments.

Development of the Plan

The general approach used in developing the plan for the Brandywine reflects two factors that are typical of rural areas as well as a strong belief as to how plans should be developed. On the one hand, few of the residents were actively concerned about existing or future environmental problems in the area. There had been no recent dramatic water pollution incidents, and few distasteful developments had been built. The spectre of change was safely out of sight. On the other hand, while there was consensus concerning broad, "motherhood" level goals, there was little appreciation of, or sympathy with, the means that would have to be used to achieve them. In light of these considerations, the planners adopted what can be called the "strategy of the better way." They gathered data about existing natural and social conditions in the watershed and, using information from nearby urbanized areas, projected probable patterns of development for the watershed if existing public and private controls and practices continued. This spectre of urban sprawl was compared with the desirable living environment that could result if the residents chose a better way: innovative legal, financial, and governmental actions that would successfully encourage a desirable form of development. In addition, the planners believed that the proper way to develop a public plan is in close cooperation with those for whom it is designed. Thus, they sought to establish immediately a two-way process of communication between themselves and the residents of the watershed and to include local representatives in the development of the plan.

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Ann Louise Strong (Affiliate AIP), Professor of City and Regional Planning at the University of Pennsylvania and Director of its Institute for Environmental Studies, has written extensively concerning the law of open space. She authored HUD's *Open Space for Urban America* and coauthored an article on an innovative approach to preserving open natural lands, "Compensable Regulations for Open Space: A Means of Controlling Urban Growth" (May 1963 *Journal*). Mrs. Strong is currently completing a book on European approaches to guiding urban development.

An initial statement [3] in the form of a twelve-page, illustrated brochure was sent to all residents of the watershed. It sketched the probable course of development under existing institutions, then set out the premises of the new proposal. These were: (1) accommodate normal growth; (2) protect water resources and amenities by preventing or limiting construction in flood plains, stream buffers, steep slopes, and forests; (3) regulate sewerage, drainage, and grading of development to protect the natural environment; and (4) buy, at fair market value, permanent conservation easements on all areas critical to water resource protection, using the county's eminent domain power where necessary. This latter recommendation was considered necessary to accomplish the other objectives. It should be emphasized because it became a major source of opposition to the plan.

DATA COLLECTION

Early in the development of the plan, the residents of the watershed were polled, using a 10 percent sample, to learn about their socioeconomic characteristics and attitudes toward the environment and the use of governmental powers to protect it. The staff assembled extensive information on land use, real estate activity, and land values, and prepared a physiographic analysis of the watershed. They made estimates of population growth to 2020 for small subwatersheds, townships, and the entire watershed. The U.S. Geological Survey established a monitoring program to measure flow, sediment, and water quality in the Upper East Branch and a neighboring control stream. The Academy of Natural Sciences carried out limnological studies. The roles of each level of government, particularly with reference to water resource management and land use planning, were explored to learn of existing and forthcoming plans and regulations, as well as to ascertain the existing pattern of intergovernmental relationships. Sanitary engineers from Drexel Institute of Technology made an analysis of the water balance and geology of the watershed and designed a basin system of water supply and sewage disposal to support a population of 38,000 without damage to stream quality. A team of appraisers estimated easement costs by land type, location, and tract size. From these estimates, they calculated total easement costs for the plan.

COMMUNICATIONS PROGRAM

In order to establish contact with the residents of the area, two advisory committees were formed and staff members, especially Robert G. Struble, Executive Director of the Walter Resources Authority, and Harold K. Wood, Jr., the authority's coordinator for the project, met with citizens, both individually and at public meetings. The Coordinating Committee consisted of two representatives named by each of the eight townships' board of supervisors, and two representatives from each county agency with areas of responsibility similar to those covered in the Brandywine proposal. This committee met every month or two with the planning staff to review ideas and to express the views of their boards or agencies toward the evolving plan. The Citizens Committee was formed of nominees of community organizations with members living in the watershed. It was established more than a year after planning had begun and due, in part, to a paucity of community organizations in the area, never became an effective means of communication.

In addition to the committees designed to promote communication within the watershed, a Technical Advisory Committee was established, consisting of eminent specialists in each of the plan's substantive study areas. Included were hydrologists, sanitary engineers, a limnologist, soil scientists, governmental relations specialists, an ecologist, planners, and foresters. This committee met intermittently to review and criticize technical recommendations.

The Water Resources Authority mailed four project publications to all property owners in the watershed. First, people were sent the brief, "The Brandywine: A Place for Man/A Place for Nature," to acquaint them with the planning objectives. About six months later, they received a five-page question and answer leaflet providing simple and succinct answers to the questions most frequently asked. In July 1967, the "Preliminary Plan and Program for the Upper East Branch of the Brandywine" was distributed, presenting preliminary data and tentative staff recommendations concerning areas critical to water resource protection and types of development restrictions. With it, each property owner received a map of his property, at a scale of 1 inch/400 feet, showing the proposed use restrictions as they would affect him. Finally, in June 1968, "The Brandywine Plan" was distributed.

THE OPPOSITION ORGANIZES

In October 1967, opponents of the project formed the Chester County Freeholders' Association, whose mission was to prevent implementation of the project. The association counted an estimated fifty of the watershed's 1,400 families among its membership and undertook a very active and energetic program for defeating the Brandywine Plan. Its leaders held well-publicized meetings, talked to many landowners in the area, circulated petitions, dominated public meetings sponsored by the authority, wrote letters to the newspapers, the Ford Foundation, and the Secretary of the U.S. Department of Housing and Urban Development, among others, criticizing the project, and demanded and received equal radio and television time to rebut authority spokesmen. In an area where civic information is transmitted mostly by word of mouth, the association did not inhibit the circulation of damaging and often wild rumors about the "real" intent or objectives of the Water Resources Authority and its consultants.

The project was an important issue in the 1967 cam-

paign for county commissioner. One Democratic candidate took a strong stand against it and was able to attract enough Republican votes to enable him to defeat his Democratic rival for the minority party position.

In an effort both to encourage resident participation in the development of the plan and to counter the often distorted images they had come to hold, hundreds of meetings were held with residents of the watershed. The project coordinator was in the field daily, calling on property owners, holding small meetings in homes, speaking before civic organizations, appearing at township planning commission and supervisors' meetings, and organizing larger meetings, including three public meetings for each township. Other staff members spoke at most of the formal meetings, participated in radio and television programs, and contributed to news articles, but Wood bore the brunt of this crucial job.

FINAL RECOMMENDATIONS

In the early months of 1968, the staff prepared its final recommendations, drawing on the suggestions of the various committees and the data collected. The staff and the Water Resources Authority were confronted with a major policy decision concerning use of eminent domain. There was increasingly virulent political opposition to eminent domain among residents of the watershed. Yet, the staff remained convinced that its use was essential to carry out the proposals in a manner that was fair to all involved and that would assure the hydrological unity of the watershed would be respected in the application of the controls. Without it, it seemed clear that holdouts would profit from the effect of others' participation. Also, the holdouts might well pollute the stream or otherwise disrupt its hydrological regimen. However, since the evidence seemed overwhelming that the residents would not accept the proposals if they included the use of eminent domain, the staff and the authority reluctantly decided to abandon it and to rely on the voluntary grant of easements by owners. With county eminent domain eliminated, the decision to proceed with the plan was passed to individual landowners who would decide whether or not it seemed attractive to them, since no agency was willing to force it on them.

The final plan and program made the following proposals, here reduced to their briefest form:

1. Land in the flood plain or within 300 feet of streams or swales should have no further development, except for the extension of existing uses and hardship situations. This land constituted 26 percent of the watershed.

2. Wooded land and land with slopes of 15 percent or greater, more than 300 feet from the stream, should be restricted to a maximum gross density of one dwelling unit per four acres and maximum impervious cover of the greater of 5 percent or two thousand square feet per lot. This land constituted 20 percent of the watershed. (See Figure 2.)

3. The above restrictions should be placed on the land through purchase of permanent conservation easements by the Water Resources Authority at fair market value. The total value of easements was estimated to be three million dollars, or 48 percent of the estimated fee value of the land. Easement value varied from 5 to 90 percent of fee value, depending on type and location of land and on easement to be acquired. Eminent domain would not be used. The program would proceed by subwatersheds of four to eight square miles, and no easements would be purchased unless owners of 80 percent of the land in a subwatershed voluntarily agreed to the plan. It was proposed that funds for the purchase of the easements be sought from the Ford Foundation, the U.S. Department of Housing and Urban Development under its Open Space Land Program, and the Pennsylvania Department of Community Affairs, from the state's Land and Water Conservation Fund. It was anticipated that local governments would not bear any of the acquisition cost.

4. Solid waste disposal, filling, grading, and tree-cutting would be covered by the easements, and the municipalities would agree to adopt erosion control regulations.

5. All municipalities would agree to plan and construct water supply and sewage disposal systems as needed to maintain water standards as specified in the plan.

These recommendations were disseminated in two publications. The first, "The Brandywine Plan," [4] was a twenty-eight-page, liberally illustrated summary that was sent to all landowners in the watershed in June 1968. The second, a three-hundred-page report [5] setting forth all technical studies and data underlying the final plan recommendations, was distributed only to township and county board and agency members, their staffs, project committee members, and others with a concern for the proposals' detailed rationale.[6]

The Outcome

After distribution of "The Brandywine Plan," a series of public meetings was scheduled, one for each township, where the proposals were aired and residents had the opportunity to express their opinions. Held in midsummer in fire halls and one-room schoolhouses, many of these meetings were evenings of high drama. As fans turned slowly overhead and assorted night insects fluttered into the dim lights, followers of an old way of life—white, Protestant, hard-working, conservative, individualistic, and God-fearing men—confronted proposals that promised change and called for cooperation, a sense of community, and use of governmental power. The opponents, often red and shaking with fear and hostility, alternately castigated the proposals as communist inspired power grabs, pleaded to be left alone to continue stewarding their valley as they and their fathers had for generations, or demanded to be left the right to profit from their land as they wished. The pro-

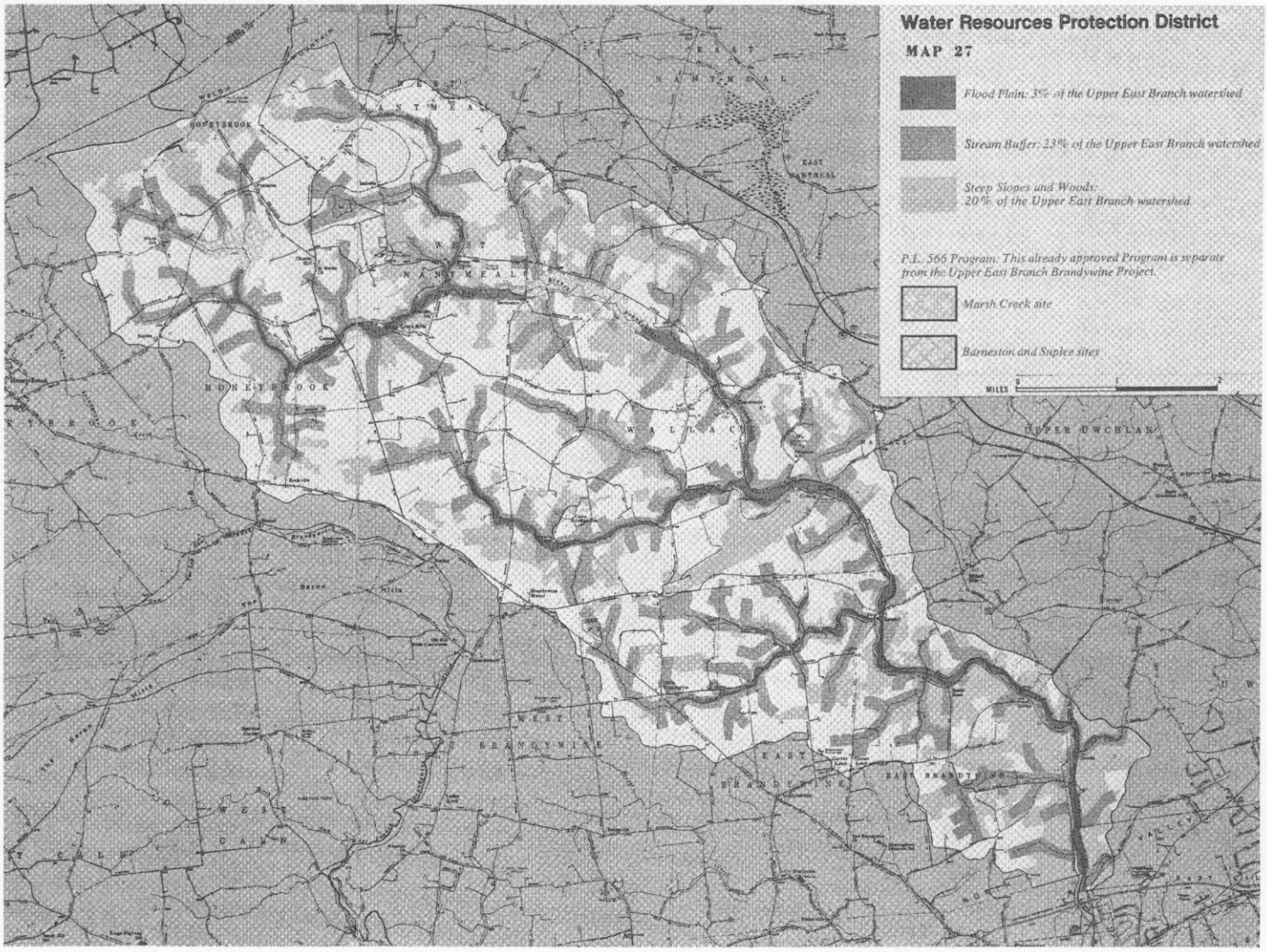

FIGURE 2 *The Water Resource Protection District Showing the Three Categories of Protected Land*

ponents were both more self-confident and more reticent. Mostly newcomers and city folk, they would have to live in the area for many years before they would be accepted by the oldtimers.

After the meetings, each township's board of supervisors tested the prevailing political wind and decided whether or not to support implementation of the project. In the end, six townships voted against it and two for it. Two of the six voting negatively indicated support of the principles but felt they should have primary responsibility for administering a program of this type. Inevitably, the Water Resources Authority and later the county commissioners acceded to the wishes of the majority and decided not to implement the plan.

Analysis

The proponents of the Brandywine Plan tried to influence the public decision-making process in the eight townships of a small rural watershed. More bluntly, they wanted political action. The sources of political choice lie deep in the other systems of society—the social institutional structure, the legal system, and the economy. Such decisions are forged in personality clashes among the actors and in the tension among the generally held values of the populace. Finally, the decisional process has a spatially rooted history and a future that is linked to the present through the actors' justified and unjustified expectations. To understand the significance of the proposals' rejection, it is necessary to examine all these factors.

THE POLITICAL SYSTEM

Politics in the Upper East Branch townships is primitive. There is little concentration of power in the hands of either individuals or groups. The question of who gets what when, is answered, if at all, elsewhere, primarily in the larger political systems and the economy.

The township supervisors have full-time jobs elsewhere and receive no salaries. Their party controls only a few part-time jobs, such as tax collector, secretary-treasurer, and township solicitor, that do not involve much money. Only one of the five townships most significantly involved in the Upper East Branch project had a budget exceeding $40,000 during the years of the

planning phase. Few of the local representatives to the county party committees have had much influence there although, during the planning phase, one of the local Democratic leaders, an exurbanite heading a prospering Philadelphia realty firm, became chairman of the County Democratic Committee, a somewhat hollow honor in overwhelmingly Republican Chester County.

At the county level, politics is a livelier game—at least for Republicans. The three-man County Board of Commissioners, whose current chairman is also chairman of the Republican County Executive Committee, presides over the expenditure of some seven million dollars a year and is responsible for filling over five hundred jobs. Still, the county's political style has traditionally been one of preserving an aura of peace and harmony, indicating either that there is, in fact, consensus or that what conflict there is, is ignored or suppressed. The government's role has been that of caretaker, with little initiative and an ethos of parsimony.[7] The elected officials give ready, anachronistic assent to the Jeffersonian principle that that government governs best which governs least. If government action is an absolute necessity, they believe it should occur at the lowest possible level. The manner in which the county commissioners passed the responsibility for decision to the township supervisors who in turn passed it to individual landowners is typical. Here is participatory democracy, but who participates? Most opponents, some proponents, few of the majority of middle-of-the-roaders, and none of the future residents who have not yet come to the valley.

It was perhaps naive of the project's initiators to expect a different pattern, one of enthusiastic support, active encouragement, public acts favorable to the project, and willingness to undertake innovative programs in the face of some civic displeasure. But the direct result of the submersion of the decision-making responsibility to the level of the individual resident landowner was to make it impossible to get a favorable decision. The large number of landowners, some 1,400, made it impossible to explain fully to each one the proposals and their impact. It was difficult to even reach many of them. Equally important, there was no forum for debate and no mechanism for resolving the numerous clashes of interest the project raised.

LOCAL INSTITUTIONS

There is a dearth of any kind of social institution in the watershed, let alone those committed to the values the Brandywine Plan sought to realize. The Brandywine Valley Association, which for over twenty years had been advocating soil conservation, pollution control, and better stream management, gave some support in the form of approbative resolutions, but its focus of concern was farther south in the valley, and it never was an important participant in the development of the plan. Otherwise, except for a few small church congregations, coon hunting clubs, and marginally active farmers' organizations, the only active social groups in the watershed were those formed to oppose actions that threatened the area. The Marsh Creek Taxpayers Association was formed to obstruct the County's P.L. 566 Small Watershed Flood Control Plan for the Upper East Branch. The Lanchester Landowners Association and the Chester County Conservation Committee came into existence to oppose, respectively, the construction of a large diameter pipeline and a 500,000 volt power line across the watershed. The Chester County Freeholders Association sought to prevent the approval and implementation of the Brandywine Plan. These associations coalesce around a few energetic individuals who express in an extreme form the attitudes of their rural constituency: individualism, opposition to change, suspicion of outsiders, opposition to government and, pervading all else, a deep and fearful sense of impotence with respect to the external economic, political, and social forces shaping their personal fate. The effect of the groups of "anti's" is to polarize discussion and sentiment. By wrapping themselves in the panoply of free enterprise, thrift, and a Populist conception of democracy, the leaders emerge as patriotic St. George's whose mission it is to destroy the dragons of socialism (conservation easements), fascism (a government sponsored program backed by the use of eminent domain), and overreaching business (the DuPont Company's alleged schemes to use the proposals to get clean water). Those who would support a program such as the Brandywine Plan are isolated and often intimidated. Seldom is it worth the personal abuse that results from becoming known as an advocate. The mass of uninformed, neutral, or indifferent citizens are put off by the stream of charges and innuendos, and their natural inclination toward remaining uninvolved is reinforced.

When the opposition is organized, individual suspicions and antagonisms are fortified by those of the group. One member can fill in for another if necessary, and there is a significant supply of moral support and even psychic energy that flows from the typical single-issue "anti" group. Individuals who favor the proposals are unsupported by institutional expectations and feel isolated, unsure, and ineffective. The absence of institutions whose objectives coincide with a proposal such as the Brandywine Plan and Program directly affects the political equilibrium.

THE LEGAL SYSTEM

To explore the sources of political decision, the legal system may be conceived of as a set of norms or desirable patterns of conduct whose probable observance is due to the existence of an enforcement agency.[8] Thus, the law has ethical or moral roots and exists as a set of shared expectations about behavior and court-enforced discipline. The norms that preoccupied residents of the Upper East Branch watershed were those guiding the activities of government officials empowered to affect

the residents' property rights. They are generally established in laws on land use control.

Many Brandywine residents think of property as a concrete, tangible thing. It is a specific piece of land, a home, a sacred enclave completely subject to the owner. To them, the "bundle of rights" concept of property is hypertheoretical and unacceptable. It has implications that seem somehow subversive of the established order. They do not accept the fact that the township supervisors, through the use of zoning and subdivision regulations, are empowered to limit significantly the ways in which landowners may use their land. For these people, ownership is virtually an absolute right to do with the land as one wishes and anything diminishing that right is at least wrong and probably unconstitutional. Certainly, the originally proposed use of eminent domain was anathema to many as a matter of principle. In addition, many of the landowners viewed the conservation easement, not as a type of compensated governmental regulation, but as a form of joint ownership of land. The very idea of sharing ownership with a government agency was to some as distasteful as sharing one's wife with the township engineer. In fact, one outspoken critic of the project was heard to say that property rights were more sacred than the marriage vow.

There was often a discrepancy between the norms residents thought governed public officials acting to regulate land and those established by the Constitution and the courts. For instance, the residents considerably underestimated the legal power of government to control land development and use, or acquire interests in, land for public purposes. This lack of congruence made it especially difficult for proponents of the Brandywine plan to convince landowners of its necessity. The plan's basic line of reasoning was that uncompensated police power regulations that sought to prevent development over a significant area of land were unconstitutional, so some form of *compensated* land use control was necessary. Many opponents were convinced that government had no power to impose a compensated control on a landowner and that, anyway, low-density zoning would do the job just as well. Neither conviction was correct, and the second was more often a convenient rejoinder that few believed or would actually have supported had it been offered as an alternative. The norm expectations actually held were the ones that counted, and they were inconsistent with the project's premises. This important divergence was undoubtedly the source of much of the political opposition to the proposals.

ECONOMIC ASPECTS

The potential economic impact of the Brandywine proposals centered on land: its present and future value, taxation, cultivation, and development. The watershed was over 90 percent undeveloped. Ownership was concentrated in relatively few hands with 20 percent of the landowners holding over 80 percent of the acreage. The annual rate of new home construction was less than one dwelling unit per square mile per year and has not changed appreciably since that time.

The pocketbook questions troubling watershed residents were: Will I receive a fair payment for my easement? What effect will the easement have on the value and marketability of my land? Will I be able to get a mortgage on land subject to an easement? How will my taxes be changed? Will I be able to continue to farm my land as I have been doing? Will I lose a large part of the future development value of my land?

The proponents of the plan sought to answer these questions as persuasively as possible. They argued that payment for the easement would be fair because it would be equal to the decline in present fair market value of the land resulting from the granting of the easement. In economic terms, the form of part of a personal asset would be changed from realty to cash, but the value of the total would remain unchanged. They explained that fair market value allows for future development probabilities by including the present value of such increase in worth, discounted by the probabilities of it accruing to the particular parcel. The residents often did not accept or understand this reasoning.

The landowners feared that the novelty of the easement approach would make land subject to an easement relatively less marketable, in ways that could not be accurately evaluated because of the absence of substantial experience with it. Many were unconvinced by arguments that the uniqueness of the protection afforded by the program would, in fact, make their land more marketable.

Despite assurances from local bankers that they would treat a property subject to a conservation easement in the same way as one subject to a utility or drainage easement, many residents were persuaded by the Freeholders' Association allegation that the easement would impair or destroy the mortgageability of their land.

There was also some question about how the easement program would affect the incidence of real property tax. While the factors involved are too intricate to be considered here, the gist of the landowner's concern was that land that could not be developed because of the easement restrictions would continue to be taxed as if it could. Whether this concern grew out of a misunderstanding of tax assessors' procedures or a general distrust of tax agents, or both, is unclear, but it was a further hurdle to be cleared.

The proposals to minimize erosion by means of erosion control regulations concerned the farmers who saw in them a threat to their fiercely protected right to cultivate their land as they wished. While this aspect of the program was not given heavy emphasis, it may have hardened the opposition of a few. Local homebuilders whose land preparation practices would be affected, did

not object to the proposals, perhaps because there was so little building activity in the area.

The proposal for a landowners' development corporation, in which easement payments could be invested so that all could share in the expected rise in development value of the watershed, never gained acceptance, largely because of charges that staff of the Water Resources Authority would profit improperly from the corporation.

Taken together, these uncertainties generated considerable reluctance toward the program among those landowners whose real property comprised a major portion of their net worth. Farmers about to retire, elderly people, couples of modest means who had sacrificed to buy a place in the country or who had inherited a farm, investors, speculators—all were motivated to resist a proposal that seemed pregnant with threats to their land. Many of the people who supported the program were so placed financially that they could afford to take a chance that they might lose some appreciation of net worth in the course of realizing their broader objectives of conserving a beautiful environment and preventing the kind of tawdry suburban sprawl from which many had escaped.

PERSONALITY PATTERNS

Another source of the political decision to reject the Brandywine Plan lay in the predominant personality structures of watershed residents. While the researchers were not equipped to study the psychological factors influencing the political and economic behavior of the Brandywine residents, it is possible to state in an impressionistic way some of the more important aspects in which the personal characteristics of the opponents differed from those of the plan's supporters.

About two-thirds of the residents of the watershed grew up in rural areas. Their world was essentially stable, tangible, and predictable. The major uncertainties were Acts of God such as flood, fire, and droughts. They and their fathers worked within the boundaries of their own land, and their labor produced tangible goods. Because their world was relatively stable, their property was a reliable, continuing element in their lives. Anything threatening their property, such as the Brandywine Plan, threatened a central element of their personalities.

Many of the opponents of the program harbored an inordinate suspicion that evil forces were conspiring to injure the people in the watershed for some personal benefit. "They" might refer to the federal government which allegedly planned to create a large recreation lake for black Philadelphians by damming the main stem of the creek and flooding virtually the entire valley. Or it might refer to the DuPont interests thirty miles downstream who were supposedly controlling the project to get clean water for their chemical plants. At any rate, the suspicious ones believed that a power structure existed and was threatening them.

Coming from a traditional, individualistic, stable milieu, residents tended to view change as a threat instead of an opportunity. They sought confirmation of the status quo and permanence. The premise of the Brandywine Plan that change would come inexorably and must be managed aggressively was not a welcome one. To the extent that they accepted the likelihood of change, each preferred to keep open his options to deal with it personally rather than as a member of a group with common objectives. The plan's *proponents* tended to be comparative newcomers, often former city and suburban residents seeking a more tranquil and spacious setting for their homes. They were more sophisticated, more travelled, more exposed to various life styles, and better educated. They were well aware of the likelihood of change and, having sought a distinctly rural environment, were personally prepared to act to protect the values of the watershed which they cherished.

DOMINANT VALUES

The typical opponent of the Brandywine Plan—and many of the other residents as well—lives tightly bound in a web of moral imperatives—the imperatives of the Protestant ethic. Work. Save. Stand on your own two feet. Worship God. The plan that could reflect their values is the market, where only the grossest of abuses are regulated by government.

The strength with which the residents were committed to these positive values was matched by the vehemence with which they denounced anyone who was lazy, prodigal, communally oriented, freethinking or somehow different. Thus, the argument ran: only people who shared local values could be trusted to plan.

For many, the black man was a symbol of both moral laxity and threatening change. While their protestations that they were not prejudiced may have been sincere, it was nevertheless a fact that one of the abiding concerns about the plan was that it would bring black Philadelphians into the area, either as residents of planned unit developments or as state park users. This they most emphatically did not want. The fact that this was a spurious issue because the plan did not include either planned unit developments or parks only underscores the fear it aroused in them.

Recommendations and Conclusions

While the outcome of this project is obviously the product of a unique series of forces and events, there are lessons that can be drawn from the experience that may improve the chances that similar undertakings elsewhere will succeed.

First, the early insistence that eminent domain was necessary to make the plan workable and fair seriously reduced the chances of its acceptance. In terms of public acceptability, it would have been wiser to proceed initially in a small watershed on a voluntary basis, develop acceptance of the plan's principles, and then test the political climate to see if the use of condemnation

was feasible. However, in the Brandywine Project the staff sought to be scrupulously fair with landowners and stated their conviction that eminent domain would be essential to achieve the water resource management and land development objectives of the plan.

Second, a proposal such as the Brandywine Plan, which seeks substantial changes in many areas of personal concern to residents, will be implemented only if it responds to deeply felt needs and desires of the people it will affect. Either local people who share these local values must originate the plan with outside advice or the project must be located in areas where the residents are known to support its objectives.

The other attitudes and values that have been recounted—deep distrust of government, rejection of anything that seemed to threaten land values, financial apprehensions, ingrained resistance to change—all further compressed the opportunity area in which significant change in land development practices could be instituted. These attitudes and values seem typical of those held by residents of rural-urban fringes in other parts of the country as well.

We conclude that a proposal such as this one is most likely to be accepted if the following factors exist:

1. Sufficient time is available to work out a program that is endorsed by a substantial number of residents. Two years was not long enough to do this in the Upper East Branch area.

2. Proponents are willing and able to proceed with experiments on a fairly small scale so that some of the novelty of the program can be dispelled.

3. Objectives of the program are modest, so as to allow more flexibility in working out a successful compromise of conflicting interests. The Brandywine Project, with its heavy baggage of legal, hydrological, financial and research goals, was probably overloaded.

4. Positive inducements are available to balance restrictions perceived by residents. The development corporation concept, though rejected in the Upper East Branch, appears to be one mechanism for making such inducements available.

The Brandywine Plan challenged each of the residents of the watershed to become a new kind of man: a steward of the land who would work with his neighbors to protect the natural beauties of the countryside while creating a community for other men not yet living there. It demanded that they ascribe to a land ethic. It was a conservative plan, calling for the retention of much land as it is today. It was democratic, seeking to place responsibility for managing change in the hands of local people through the development corporation, local land use controls, and county administration of the conservation easements. Yet it was also a plan that affirmed the advent of change and suggested ways of making that change servant, not master.

Many were responsive to the challenge, at least in principle, and a few were willing to grant easements and otherwise support the effort. Most endorsed the goals of the plan. Yet, when it came to the cutting edge of decision, the point where benefits were stacked against costs, most either abdicated from decision or rejected the challenge. They were unwilling to subordinate their individual interests to those of the community of people who now live or in the future would live in the watershed. They were unable to envision the probability of future monetary and environmental gain for all and unwilling to trade that long-term probability for the shorter term probability of individual profit from the sale of land for development. They were unable or unwilling to modify deeply held beliefs that conflicted with the land ethic.

NOTES

[1] Ann Louise Strong, *Open Space for Urban America* (Washingington, D.C.: U. S. Government Printing Office, 1965); Ann Louise Strong and Jan Z. Krasnowiecki, "Compensable Regulations for Open Space," *Journal of the American Institute of Planners,* XXIX. No. 2 (May 1963), 87–97; and Robert E. Coughlin, John C. Keene, Benjamin Stevens, and Ann Louise Strong, "Private Open Space and Public Benefit," (Philadelphia: Institute for Environmental Studies, University of Pennsylvania, 1965).

[2] Subsequently, support also was granted by the Federal Water Pollution Control Administration, the Pennsylvania Department of Public Instruction, and the America the Beautiful Fund.

[3] "The Brandywine: A Place for Man/A Place for Nature," (West Chester, Pa.: The Upper East Branch Brandywine Project of the Chester County Water Resources Authority, February 1967).

[4] *The Brandywine Plan,* (West Chester, Pa.: The Chester County Water Resources Authority, 1968).

[5] *The Plan and Program for the Brandywine,* (Philadelphia: Institute for Environmental Studies, Regional Science Research Institute, and U. S. Geological Survey, 1968). Individual copies of this report, at $3.50 per copy, are available from the Institute for Environmental Studies, 3400 Walnut Street, Philadelphia, Pa. 19104.

[6] In addition to these publications, the authors of this article supervised the production of a twenty-two minute movie, "Urban Sprawl vs. Planned Growth," which documents the effects of urbanization on water resources and presents several planning approaches to the problem, emphasizing the Brandywine proposals. The preparation of the film was supported by a grant made under Title I of the Higher Education Act of 1965, by the Pennsylvania Department of Public Instruction. Copies of the film may be obtained from Stuart Finley, 3428 Mansfield Road, Falls Church, Virginia.

[7] See, Oliver Williams, "A Typology for Local Comparative Government," *Midwest Journal of Political Science* (May 1961), 150–64; Edward C. Banfield and James Wilson, *City Politics,* (New York: Vintage Books, 1963) pp. 24–25; and Charles E. Gilbert, *Governing the Suburbs* (Bloomington: Indiana University Press, 1967), p. 47.

[8] See, Max Weber, *On Law in Economy and Society* (New York: Simon and Schuster, 1967), pp. 5, 6, and 11.